

ABSTRACT

A cured ablative composite assembly comprises a housing enclosing a pair of ablative composite sub-assemblies joined by a film adhesive. The cured ablative composite assembly is made by surface treating both ablative composite sub-assemblies in preparation for joining; coupling one ablative composite sub-assembly to another ablative composite sub-assembly with a film adhesive and enclosing the uncured ablative composite assembly within a housing; and depositing the combination of the housing and uncured ablative composite assembly in a ventilated oven with a load applied to the combination housing and uncured ablative composite assembly. The film adhesive is cured providing a portion of a hot gas valve suitable for use in tactical missiles. The film adhesive does not erode at the high temperatures (5000° F) encountered in hot gas rocket exhausts, thereby providing a seal that offers high strength, pressure-tight joints.